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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/597,515	07/27/2006	Raymond Clarke	14752-1US	2212

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EXAMINER	
THAKUR, VIREN A	

ART UNIT	PAPER NUMBER
1782	

NOTIFICATION DATE	DELIVERY MODE
02/18/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/597,515	CLARKE ET AL.	
	Examiner	Art Unit	
	VIREN THAKUR	1782	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 September 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *17,18 and 22-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *17,18 and 22-37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 November 2006* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *8/6/2010;9/1/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "12" has been used to designate both two different elements as shown in figure 3 and figure 7. Also, figure 7 and 8 both use item 21 to show both, perforations and an atmosphere control member. Figure 8 also relies on reference number "11" but the figure and specification is not clear as to what this is pointing to. It is noted that on page 17, lines 34-35, applicants' specification indicates that reference number "11" shows a box shaped container and a module comprising a frame.

The drawings are objected to under 37 CFR 1.83(a) because they fail to show a plurality of containers comprising pinholes as described in on page 18, lines 20-23 of the specification. It is also noted that Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 34-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 34 recites the limitation, "the respiring biological material." This limitation lacks sufficient antecedent basis.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 17, 18, 22, 23, 32 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marcellin. Marcellin was cited in the IDS filed August 6, 2010.

Regarding claim 17, Marcellin teaches a storage container (see figure 10B on page 231) which has been designed to contain a biological material such as respiring foodstuffs and is sealed around the foodstuffs. Marcellin also teaches a module (see figure 10B - Exchanger-Diffuser) which is within the container, and comprises an inlet and outlet for gas, and an atmosphere control member having a first and second surface. Marcellin teaches that the exchanger-diffusers are made from a silicone elastomer pocket made from pockets which are similarly used in atmosphere control members such as those employed for diffusion windows (see page 230 sections labeled "1" and "2"). One of those membrane surfaces shown in figure 10B has a surface in contact with the inner atmosphere and one which is not in contact with the inner atmosphere, but rather is exposed to a second atmosphere of a particular gas (see the arrows shown in the exchanger-diffuser of figure 10B).

Regarding the particular surface area of the atmosphere control member, it is noted that Marcellin teaches the diffusion members having a surface area of 3 square meters (see section labeled "1" on page 230) – which is thus a surface area greater than 0.65 square meters.

Claim 17 differs from Marcellin in specifically reciting that the container has a capacity of at least 40 cubic meters.

It is noted however, that the particular size of container would nonetheless have been an obvious matter of design and/or choice depending on the particular amount of respiring foodstuffs that were desired to be held in the container.

Regarding claim 18, which recites that the container comprises a pressure-generating means for supplying gas to the second surface of the atmosphere control member and a metering device for changing the rate at which gas can be supplied to the second surface of the atmosphere control member, it is noted that Marcellin teaches the use of a blower, which thus creates a degree of pressure for supplying gas to the second surface, and also controls the rate at which the gas can be supplied to the second surface (see figure 10B).

Regarding claims 22, 23 and 32, which recites that the chamber comprises atmosphere control members on a major face and an inlet and outlet for incoming and outgoing gases on a first and second minor opposite faces, respectively, it is noted that Marcellin teaches that the atmosphere control members are on a major face, as shown in figure 10B in cross-section. The “top” and “bottom” as shown in figure 10B can be considered minor faces on which are inlet and outlets for incoming and outgoing gases, respectively. Claims 22 and 23 differ from Marcellin in that the shape of the chamber is rectangular parallelepiped or cylindrical, respectively. It is noted however, that since Marcellin already teaches a chamber with opposite facing inlet and outlets for gases and another face with atmosphere control members, the particular shape

of the chamber is not seen to have provided a patentable distinction over the reference.

Regarding claim 37, it is noted that Marcellin teaches attaching the diffusion battery to the container (see right hand column on page 230). Therefore, it is noted that the diffusion battery would have been capable of being removed and placed into another container when the container was not sealed.

6. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Marcellin in view of Clarke (US 20020127305) and De Moor (US 6013293).

Regarding claim 24, Marcellin teaches placing respiring materials in the containers, but claim 24 differs in reciting that the respiring biological material is paced in a plurality of ACM containing sealed inner containers. It is noted however, that Clarke teaches placing respiring biological materials in a plurality of ACM-containing sealed inner containers (paragraphs 0043-0046).

It is noted however, that Clarke similarly teaches providing controlled atmosphere of respiring biological materials, where the respiring biological materials are contained in inner sealed containers, which have a mechanism for allowing gases to enter and leave the package atmosphere (see paragraphs 0043-0046). It is noted that De Moor also teaches that it has been conventional to employ atmosphere control members for the purpose of maintaining a particular atmosphere within a package which comprises respiring materials (see

column 4, lines36-45). It is noted that the art teaches that the maintainence of a controlled atmosphere facilitates preventing ripening of respiring material until a desired time and for being able to increase the rate of ripening. This ability to control ripening would also have been a function of the particular atmosphere present in the package and the particular rate of exposure of the respiring material to the various gases. This has also been taught by DeMoor on column 5, lines 1-15). Therefore, to modify Marcellin and to first place the respiring material in a plurality of sealed inner packages which have atmosphere control members would thus have been obvious to one having ordinary skill in the art for the purpose of maintaining a particular controlled atmosphere within the packages and for achieving a particular rate of transmission of the gases that affect the respiring material.

7. Claims 25 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marcellin in view of De Moor (US 6013293) and Nagata (US 4949847).

Regarding claim 25, Marcellin teaches employing more than one atmosphere control member, as shown by figure 10B on page 231 and by section 1 on page 230.

Claim 25 differs in reciting that one of the atmosphere control members is a selective atmosphere control member while another is non-selective.

It is noted however, that De Moor teaches employing more than one atmosphere control member, where one control member can be selective, such

as a gas permeable membrane, and another can be non-selective, such as an aperture (see item 123). The combination of atmosphere control members facilitate in achieving a particular rate of transmission of gases to the respiring material (see column 5, lines 1-15 of De Moor). Additionally, Nagata teaches a similar arrangement as that shown in applicant's figures for controlling the atmosphere to which a respiring material has been exposed. For instance, in figures 2 and 3, Nagata teaches a selectively permeable material (5) and a non-selective permeable material (3) which has been employed to provide the requisite degree of gas transfer and thus atmosphere control. Since Marcellin already teaches employing more than one atmosphere control member in the module, to thus modify one of the atmosphere control members and to thus employ both a selective and a non-selective atmosphere control member would thus have been an obvious result effective variable, routinely determined through experimentation for the purpose of achieving the requisite gas atmosphere within the container.

Regarding claim 33, Marcellin teaches that the atmosphere control member comprises a microporous film which is coated with a polymeric material, such as silicon elastomer coated fabric. If it could be construed that the fibrous mesh is not a microporous film, it is noted that both Nagata and De Moor teach the use of coated microporous films for the same purpose as applicants. Therefore, to modify Marcellin, if necessary, and employ a coated microporous film would have been obvious to one having ordinary skill in the art, for the purpose of achieving the requisite degree of atmosphere control.

8. Claims 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claims 25 and 33, above and in further view of Clarke (US 20020127305).

Regarding claim 26, Marcellin is silent as to an R ratio for the selective atmosphere control member being at least 2.5 and the non-selective atmosphere control member comprising a single, large perforation or a plurality of perforations.

It is noted however, that DeMoor already teaches a non-selective atmosphere control member that has a "single relatively large perforation." Nagata teaches a plurality of "relatively small perforations." Regarding the selective atmosphere control member having an R ratio of at least 2.5, it is noted that Clarke teaches that the R ratio of the permeable membrane of at least 3.5 (see paragraph 0167). As discussed in the rejections above, the art teaches that the permeability due to atmosphere control members can vary based on the particular Since Marcellin teaches that the atmosphere is essentially controlled by the ability of the membranes to control the flow of the particular gases, to thus modify one of the permeable membranes and employ a different degree of diffusability would thus have been an obvious result effective variable, routinely determined through experimentation for the purpose of achieving the desired atmosphere within the container.

Regarding claim 27, it is noted that Marcellin teaches more than one chamber as a result of the multiple porous membranes (see the arrows in figure 10B on page 231, which depict multiple passages for the gas). Claim 27 differs from Marcellin in reciting that each of the chambers has an atmosphere control member having a different R ratio.

Since the art already teaches employing multiple atmosphere control members for the art recognized function of achieving a particular controlled atmosphere within a container comprising respiring foodstuffs, as taught by DeMoor, Clarke and Nagata, to thus employ a first atmosphere control member in a first chamber of the module, and a second atmosphere control member in a second chamber of the module, where the first control member has an R ratio of 11 to 2.3 and the second control member has an R ratio greater than that of the first control member would thus have been an obvious result effective variable, routinely determined through experimentation for the purpose of achieving the desired atmosphere within the container.

9. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Marcellin in view of Clarke (US 20020127305).

Regarding claim 28, it is noted that Marcellin teaches various oxygen and carbon dioxide atmospheres and transmission rates based on the particular type of respiring material that is to be packaged (see at least, page 218, 1.3; page 230 table 1; and page 233, right column, “examples”). Also, it is noted that Marcellin teaches on figure 11B, that the atmosphere within the container has at a point

greater than 0 months, an oxygen concentration greater than 15 and a carbon dioxide concentration of at least 3 (see the second data point of oxygen and carbon dioxide). Furthermore, claim 28 does not specify when the inner atmosphere and the second atmosphere has the recited oxygen and carbon dioxide concentrations, but rather only specifies that at some point, the atmospheres should have the recited concentrations of oxygen and carbon dioxide.

In any case, claim 28 differs from Marcellin in the particular concentration of the inner atmosphere and the second atmosphere.

It is further noted, however, that the particular atmosphere inside the container would also have been a function of the type of respiring foodstuff to be packaged. For instance, Clarke also teaches that the “inner atmosphere” of 28%oxygen with 15% carbon dioxide for preservation purposes as well as for maintaining respiration of the respiring material (see paragraph 0067-0068 and 0071). Therefore, Clarke teaches that there is an advantage to providing an increased oxygen and carbon dioxide atmosphere in the inner container, and thus to modify Marcellin, if necessary, and employ these concentrations would have been obvious to one having ordinary skill in the art, for the purpose of ripening fruits while also providing preservation (due to carbon dioxide). Regarding the particular concentration of oxygen and carbon dioxide in the second atmosphere, it is noted that it would have been obvious to one having ordinary skill in the art that the particular concentrations of oxygen and carbon dioxide in the module through which these gases pass into the inner container,

would have been a function of the particular permeability of the atmosphere control members and the respiration of the biological material, for the purpose of maintaining a particular atmosphere within the container.

10. Claims 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claim 28, and in further view of De Moor (US 6013293) and Liston et al. (US 5801317).

Regarding claim 29, Marcellin obviously teaches a flow of gas over a second atmosphere control member, but claim 29 differs in reciting that the rate at which the second atmosphere flows over the second surface of the atmosphere control member is controlled by one or more sensors which measure the concentration of the at least one gas in the inner atmosphere. It is noted that it has been conventional in the art to employ sensors for this purpose. For instance, DeMoor teaches employing sensors which measure the gas concentration in the container, and which thus control the flow of gases into the container (see figures 3 and 4 and column 8, lines 15-44). Additionally, Liston also teaches the use of sensors for this same purpose (see column 2, lines 15-39). Since Marcellin already teaches diffusing gas into the container for maintaining a particular atmosphere within the inside of the container, to thus modify Marcellin and employ sensors which would thus monitor the flow and concentration of the gas would thus have been obvious to one having ordinary skill in the art, for the purpose of ensuring that the atmosphere within the container is maintained at the desired concentration.

Regarding claims 30 and 31, it is noted that since Marcellin already teaches a flow of gas over the atmosphere control members, that the particular flow rate of the atmosphere through the second chamber would also have been a function of the particular atmosphere within the container and the degree of diffusion of the gases required for maintaining a particular gas atmosphere.

11. Claims 18 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marcellin in view of Schouten (US 5791236).

Regarding claim 34, it is noted that Marcellin teaches placing respiring biological material in the container. Regarding the limitation in the preamble "shipping container as defined in claim 17," it is noted that Marcellin teaches the limitations of the shipping container, as discussed in the rejection of claim 17, above. Regarding the step of placing the module in the container, Marcellin teaches that the module has been placed into the container (see right column of page 230), but claim 34 differs in reciting that the module is placed into the container after placing the respiring biological material. It is noted however, that whether the module was first placed into the container or was placed into the container after placing the respiring biological material therein would have been an obvious rearrangement of steps that would not have provided a patentable distinction over the prior art. Regarding connecting the inlet of the module to a conduit, Marcellin teaches that the inlet to the module has been connected to a conduit, as shown in figure 10B but claim 34 differs in reciting that the conduit is connected to one or more sources of gas. It is noted however, that Schouten

teaches conduits that are connected to sources of gas (see column 3, lines 14-25) for the purpose of being able to introduce gases into the chamber for the purpose of maintaining a particular atmosphere within the container (see column 4, lines 48-61). Since Marcellin is also concerned with maintaining a particular atmosphere within a container which comprises respiring materials, to thus modify Marcellin and connect gas sources to the conduit would thus have been obvious to one having ordinary skill in the art, for the purpose of being able to effectively control the particular concentration of oxygen and carbon dioxide within the container. Regarding the limitation of connecting the outlet to a gas disposal means, it is noted that applicants' specification indicates that the gas disposal means can comprise the atmosphere. It is noted that Marcellin also teaches discharging into the atmosphere.

Regarding the limitation of sealing the container, it is noted that Marcellin already teaches sealing the container, especially by using a sealed coating (see figure 10B).

Regarding claim 18, it is noted that if it could be construed that the blower is not a pressure generating means for supplying gas, but is a metering device for changing the rate at which gas can be supplied, then Schouten has been relied on as discussed above with respect to claim 34 to teach a pressure generating means for supplying gas, such as a pressurized cylinder for supplying a particular controlling gas to the container. Therefore, to employ a gas cylinder as taught by Schouten would have been obvious to one having ordinary skill in the art, based on the particular type of respiring material in the container and the

particular modified atmosphere required to either preserve or control the ripening of the biological material.

12. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claims 18 and 34, above, and in further view of Clarke (US 20020127305) or Burg (US RE28995).

Regarding claim 35, Marcellin teaches placing respiring foodstuff into the container but does not specifically state foodstuff such as green bananas. It is noted however, that it has been conventional to place green bananas within a controlled atmosphere, for the purpose of controlling the ripening and shelf-life of the bananas. Clarke for instance, teaches placing green bananas into a controlled atmosphere container (see at least, paragraph 0080). Burg also teaches maintaining a controlled atmosphere for green bananas (see "exemplary claim" and column 3, lines 33-48). Therefore, to modify Marcellin who already teaches placing respiring foodstuff into the container and to thus place green bananas would have been an obvious substitution of one conventional respiring foodstuff that requires atmosphere control, for another conventional respiring foodstuff that requires atmosphere control.

13. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claim 35, above and in further view of De Moor (US 6013293) and Nagata (US 4949847).

Regarding claim 36, Marcellin teaches employing more than one atmosphere control member, as shown by figure 10B on page 231 and by section 1 on page 230.

Claim 36 differs in reciting that one of the atmosphere control members is a selective atmosphere control member while another is non-selective.

It is noted however, that De Moor teaches employing more than one atmosphere control member, where one control member can be selective, such as a gas permeable membrane, and another can be non-selective, such as an aperture (see item 123). The combination of atmosphere control members facilitate in achieving a particular rate of transmission of gases to the respiring material (see column 5, lines 1-15 of De Moor). Additionally, Nagata teaches a similar arrangement as that shown in applicant's figures for controlling the atmosphere to which a respiring material has been exposed. For isntance, in figures 2 and 3, Nagata teaches a selectively permeable material (5) and a non-selective permeable material (3) which has been employed to provide the requisite degree of gas transfer and thus atmosphere control. Since Marcellin already teaches employing more than one atmosphere control member in the module, to thus modify one of the atmosphere control members and to thus employ both a selective and a non-selective atmosphere control member would thus have been an obvious result effective variable, routinely determined through experimentation for the purpose of achieving the requisite gas atmosphere within the container.

Double Patenting

14. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

15. Claim 17 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 3,5, 8 and 12 of copending Application No. 11989513.

Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 3 and 8 teach a chamber (i.e. module) which comprises an atmosphere control member, and which can comprise two atmosphere control members, where one of the atmosphere control members has a first surface in contact with the inner atmosphere and a second surface not in contact with the inner atmosphere, not being a part of the exterior surface of the container and being in contact with a second atmosphere. Regarding the

particular surface area of the ACM being greater than 0.65 square meters, it would have been obvious to one having ordinary skill in the art that the particular size of the atmosphere control member would have affected its ability to provide the desired control of gases. Therefore, it is noted that this would have been a function of the particular atmosphere that was desired to be maintained and thus would have been routinely determined through experimentation.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

16. Claims 18 and 34 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 3,5, 8 and 12 of copending Application No. 11989513, as applied to claim 17 above, and in further view sof Marcellin and Schouten (US 5791236).

Claim 18 differs from the copending claims in reciting that the container comprises a pressure-generating means for supplying gas to the second surface of the ACM and a metering device for changing the rate at which gas can be supplied to the second surface of the ACM.

It is noted that Marcellin teaches the use of a blower, which thus creates a degree of pressure for supplying gas to the second surface, and also controls the rate at which the gas can be supplied to the second surface (see figure 10B). Since the copending claims employ a chamber similar to that of the claims of this application, for the same purpose of providing a particular inner atmosphere to

the container, to thus modify the copending claims and employ both a pressure generating means for supplying gas to the second surface of the ACM and a metering device for changing the rate at which gas can be supplied to the second surface of the ACM would thus have been obvious to one having ordinary skill in the art, for the purpose of maintaining the requisite atmosphere within the container based on the particular respiring biological material within the container.

If it could be construed that Marcellin does not teach a pressure generating means for supplying gas, Schouten has been relied to teach a pressure generating means for supplying gas, such as a pressurized cylinder for supplying a particular controlling gas to the container. Therefore, to employ a gas cylinder as taught by Schouten would have been obvious to one having ordinary skill in the art, based on the particular type of respiring material in the container and the particular modified atmosphere required to either preserve or control the ripening of the biological material.

Regarding claim 34, the copending claims teach the steps of placing respiring material in the container and sealing the container. The copending claims also teach that the chamber comprising the ACMs is attached to the container and that the packaging atmosphere can be circulated around the gas treating assembly (see copending claim 5). If the gas is circulated around the treating assembly, then it would have been obvious to one having ordinary skill in the art that the assembly could have been inside the container comprising the respiring material. Nevertheless, Marcellin has been relied on to teach that it has

been conventional to place a similar gas treating assembly inside of the container. Therefore, to place the gas treating assembly inside the container would have been obvious to one having ordinary skill in the art for the purpose of being able to control the atmosphere around the respiring material.

Regarding the step of placing the module in the container, the combination applied above would clearly teach one of ordinary skill to place the gas treating assembly inside the container. Claim 34 differs in reciting that the module is placed into the container after placing the respiring biological material. It is noted however, that whether the module was first placed into the container or was placed into the container after placing the respiring biological material therein would have been an obvious rearrangement of steps that would not have provided a patentable distinction over the prior art. Regarding connecting the inlet of the module to a conduit, the copending claims are silent in this regard. It is noted however, Marcellin teaches that the inlet to the module has been connected to a conduit, as shown in figure 10B but claim 34 differs in reciting that the conduit is connected to one or more sources of gas. It is noted however, that Schouten teaches conduits that are connected to sources of gas (see column 3, lines 14-25) for the purpose of being able to introduce gases into the chamber for the purpose of maintaining a particular atmosphere within the container (see column 4, lines 48-61). Since the copending claims are also concerned with maintaining a particular atmosphere within a container which comprises respiring materials, to thus modify the copending claims as taught by Marcellin and Schouten and connect gas sources to the conduit would thus have been obvious

to one having ordinary skill in the art, for the purpose of being able to effectively control the particular concentration of oxygen and carbon dioxide within the container. Regarding the limitation of connecting the outlet to a gas disposal means, it is noted that applicants' specification indicates that the gas disposal means can comprise the atmosphere. It is noted that Marcellin also teaches discharging into the atmosphere.

Regarding the limitation of sealing the container, it is noted that the copending claims teach a sealed container.

17. Claims 22-23, 32, 33 and 37 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 3,5, 8 and 12 of copending Application No. 11989513 in view of Marcellin.

Regarding claim 22 and 23, the copending claims teach an inlet and an outlet to the chamber and a first and second ACM but does not specify the particular orientation of each of the ACM's and the inlet and outlet. It is noted however, that Marcellin teaches opposite facing ACM's and an inlet and outlet on opposite ends as well, for the same purpose as the copending claims. Therefore, to employ a similar arrangement in the copending claims would thus have been obvious to one having ordinary skill in the art, for the purpose of controlling the diffusion of the requisite gases into the atmosphere surrounding the respiring materials. Whether the chamber was circular or parallelepiped

would thus have been an obvious matter of design since the art already teaches opposite facing ACMs with an inlet and an outlet on "minor" faces.

Regarding claim 33 which recites that the ACM comprises a microporous film having a polymeric coating thereon, it is noted that Marcellin teaches a microporous film (such as a mesh film), which has been coated with a silicon elastomer polymer (see at least, page 230). Therefore, to modify the copending claims and employ an ACM which comprises a microporous film having a polymeric coating thereon would have been an obvious result effective variable, routinely determined through experimentation for the purpose of providing the requisite degree of atmosphere control.

Regarding claim 37, it is noted that the copending claims do not specify whether the module is removable. It is noted however, that Marcellin teaches attaching the diffusion battery to the container (see right hand column on page 230). It is noted that the diffusion battery would have been capable of being removed and placed into another container when the container was not sealed. Therefore, to modify the copending claims and make the module removable would have been obvious to one having ordinary skill in the art for the purpose of being able to remove it and use it in another container.

18. Claim 24 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1,3,5,8 and 12 of copending Application No. 11989513, as applied to claim

17 above, and in further view of Clarke (US 20020127305) and De Moor (US 6013293).

Regarding claim 24, the copending claims teach that the respiring biological material can be contained in a packaging atmosphere (see copending claim 1) but the copending claims are silent as to the packaging comprising an ACM.

It is noted however, that Clarke similarly teaches providing controlled atmosphere of respiring biological materials, where the respiring biological materials are contained in inner sealed containers, which have a mechanism for allowing gases to enter and leave the package atmosphere (see paragraphs 0043-0046). It is noted that De Moor also teaches that it has been conventional to employ atmosphere control members for the purpose of maintaining a particular atmosphere within a package which comprises respiring materials (see column 4, lines36-45). It is noted that the art teaches that the maintainence of a controlled atmosphere facilitates preventing ripening of respiring material until a desired time and for being able to increase the rate of ripening. This ability to control ripening would also have been a function of the particular atmosphere present in the package and the particular rate of exposure of the respiring material to the various gases. This has also been taught by DeMoor on column 5, lines 1-15). Therefore, to modify the copending claims and to first place the respiring material in a plurality of sealed inner packages which have atmosphere control members would thus have been obvious to one having ordinary skill in the art for the purpose of maintaining a particular controlled atmosphere within

the packages and for achieving a particular rate of transmission of the gases that affect the respiring material.

This is a provisional obviousness-type double patenting rejection.

19. Claims 25-27 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1,3,5,8 and 12 of copending Application No. 10989513, as applied to claim 17 above, and in further view of De Moor (US 6013293) and Nagata (US 4949847).

Regarding claim 25, the copending claims teach employing more than one ACM and further teach where one has an R ratio of 1-2.3 while the other has an R ratio greater than 1-2.3, such as at least 3 (see copending claim 12).

Claim 25 differs in reciting that one of the atmosphere control members is a “selective” atmosphere control member while another is “non-selective.”

It is noted however, that De Moor teaches employing more than one atmosphere control member, where one control member can be selective, such as a gas permeable membrane, and another can be non-selective, such as an aperture (see item 123). The combination of atmosphere control members facilitate in achieving a particular rate of transmission of gases to the respiring material (see column 5, lines 1-15 of De Moor). Additionally, Nagata teaches a similar arrangement as that shown in applicant’s figures for controlling the atmosphere to which a respiring material has been exposed. For instance, in figures 2 and 3, Nagata teaches a selectively permeable material (5) and a non-

selective permeable material (3) which has been employed to provide the requisite degree of gas transfer and thus atmosphere control. Since the copending claims already teach employing more than one atmosphere control member in the module, to thus modify one of the atmosphere control members and to thus employ both a selective and a non-selective atmosphere control member would thus have been an obvious result effective variable, routinely determined through experimentation for the purpose of achieving the requisite gas atmosphere within the container.

This is a provisional obviousness-type double patenting rejection.

20. Claim 35 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1,3,5,8 and 12 of copending Application No. 10989513, as applied to claims 18 and 34, above, and in further view of Clarke (US 20020127305) or Burg (US RE28995).

Regarding claim 35, the copending claims teach a respiring biological material but claim 35 differs in reciting that the material is green bananas. It is noted however, that it has been conventional to place green bananas within a controlled atmosphere, for the purpose of controlling the ripening and shelf-life of the bananas. Clarke for instance, teaches placing green bananas into a controlled atmosphere container (see at least, paragraph 0080). Burg also teaches maintaining a controlled atmosphere for green bananas (see “exemplary

claim" and column 3, lines 33-48). Therefore, to modify the copending claims which already teach placing respiring foodstuff into the container and to thus place green bananas would have been an obvious substitution of one conventional respiring foodstuff that requires atmosphere control, for another conventional respiring foodstuff that requires atmosphere control.

21. Claim 36 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1,3,5,8 and 12 of copending Application No. 10989513, as applied to claim 35 above, and in further view of De Moor (US 6013293) and Nagata (US 4949847).

Regarding claim 36, the copending claims teach employing more than one ACM.

Claim 36 differs in reciting that one of the atmosphere control members is a selective atmosphere control member while another is non-selective.

It is noted however, that De Moor teaches employing more than one atmosphere control member, where one control member can be selective, such as a gas permeable membrane, and another can be non-selective, such as an aperture (see item 123). The combination of atmosphere control members facilitate in achieving a particular rate of transmission of gases to the respiring material (see column 5, lines 1-15 of De Moor). Additionally, Nagata teaches a similar arrangement as that shown in applicant's figures for controlling the atmosphere to which a respiring material has been exposed. For isntance, in

figures 2 and 3, Nagata teaches a selectively permeable material (5) and a non-selective permeable material (3) which has been employed to provide the requisite degree of gas transfer and thus atmosphere control. Since the copending claims already teach employing more than one atmosphere control member in the module, to thus modify one of the atmosphere control members and to thus employ both a selective and a non-selective atmosphere control member would thus have been an obvious result effective variable, routinely determined through experimentation for the purpose of achieving the requisite gas atmosphere within the container.

Information Disclosure Statement

22. It is noted that Anderson US4842875 and Clarke et al. US 6376032, which were already listed on the IDS filed September 1, 2006 were cited again on the IDSs filed on the IDS filed August 6, 2010 have been crossed off to eliminate a duplicate listing.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VIREN THAKUR whose telephone number is (571)272-6694. The examiner can normally be reached on Monday through Friday from 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571)-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Viren Thakur/
Examiner, Art Unit 1782